Claims

What is claimed is:

1. A system for rendering an image of an object having a curved surface, comprising:

a determiner adapted to determine M number of attributes relating to rendering the image, M being an integer;

a first processor adapted to pre-compute N number of attributes relating to rendering the image, N being an integer less than or equal to M, and the N number of attributes being pre-computable; and

a second processor adapted to compute the M number of attributes.

2. The system of claim 1, the N number of attributes having characteristics associated with the symmetrical nature of objects having a curved surface.

3. The system of claim 1, the M number of attributes including one or more light sources.

4. The system of claim 1, the M number of attributes including one or more viewing positions.

5. The system of claim 1, wherein the determiner determines at least one of an ambient lighting component, a diffuse lighting component, a specular lighting component, an intensity, a pole vector, an equator vector, a latitude, a longitude, a color and a texture.

6. The system of claim 1, wherein the first processor pre-computes the N number of attributes relating to rendering the image pre-computes for one or more pixels, characterized by an x attribute, a y attribute and a z attribute, at least one of an ambient lighting component, a diffuse lighting component, a specular lighting component, a pole vector, an equator vector and a pole crossing equator vector.

7. The system of claim 1, wherein the first processor pre-computes the N number of attributes relating to rendering the image pre-computes an edge buffer for one or more objects.

8. The system of claim 1, wherein the object is a lit sphere.

9. The system of claim 8, wherein the object is a textured sphere.

10. The system of claim 1, wherein the object is bump-mapped.

11. A method for rendering an image of an object having a curved surface, comprising:

determining an M number of attributes relating to rendering the image, M being an integer,

pre-computing an N number of attributes relating to rendering the image, N being an integer less than or equal to M; computing the M number of attributes; and

rendering an image based, at least in part, on the N pre-computed attributes and the M computed attributes.

12. The method of claim 11, wherein determining the M number of attributes relating to rendering the image further comprises:

computing for one or more pixels, at least one of an ambient lighting component, a diffuse lighting component, a specular lighting component, an intensity, a pole vector, an equator vector, a latitude, a longitude, and a texture.

13. The method of claim 11, wherein pre-computing the N number of attributes relating to rendering the image further comprises:

computing for one or more pixels characterized by an x attribute, a y attribute and a z attribute at least one of an ambient lighting component, a diffuse lighting component, a specular lighting component, a pole vector, an equator vector and a pole crossing equator vector.

14. The method of claim 13, wherein pre-computing the N number of attributes relating to rendering the image further comprises:

pre-computing an edge buffer for one or more spheres.

15. The method of claim 11, the N number of pixel attributes having characteristics associated with the symmetrical nature of objects having a curved surface.

16. The method of claim 11, the M number of attributes including one or more light sources.

17. The method of claim 11, the M number of attributes including one or more viewing positions.

18. The method of claim 11, wherein the object is a lit sphere.

19. The method of claim 18, wherein the sphere is textured.

20. The method of claim 11, wherein the object is bump-mapped.

21. A computer-readable medium having computer-executable instructions for performing the method of claim 11.

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